

DYNAMIC ADAPTATION OF GESTURES FOR
MOTION CONTROLLED HANDHELD DEVICES

ABSTRACT

A motion controlled handheld device includes a display having a viewable surface and operable to generate an image and a gesture database maintaining a plurality of gestures. Each gesture is defined by a motion of the device with respect to a first position of the device. The gesture database comprises a first gesture set and a second gesture set. The device includes a motion detection module operable to detect motion of the handheld device within three dimensions and to identify components of the motion in relation to the viewable surface. The device also includes a control module operable to track movement of the handheld device using the motion detection module, compare the tracked movement against the gestures in the first gesture set to determine matching gestures, monitor user precision in indicating the matching gestures, determine that the user precision exceeds a precision threshold, prompt the user to enable the second gesture set, and in response to an appropriate user command, enable the second gesture set such that the controller compares subsequent motion of the device against the gestures in the second gesture set.